Understanding TBI

Traumatic brain injury (TBI) is a serious public health problem in the United States and Nebraska. A TBI is caused by a bump, blow, jolt, or penetration to the head that disrupts the normal function of the brain. Each year, traumatic brain injuries contribute to a substantial number of deaths and cases of permanent disability.

Impact and Magnitude of TBI

During 2011, a TBI was sustained by 11,509 people in Nebraska. Among those injured, TBI was reported as a cause of death on the death certificate alone or in combination with other injuries or conditions for 334 (17.4 per 100,000) people. Another 1,551 (79.3 per 100,000) people, were hospitalized with a TBI alone or in combination with other injuries or conditions, and an additional 9,624 (517.3 per 100,000) people were treated and released from emergency departments with a TBI alone or in combination with other injuries or conditions. An unknown number of individuals sustained injuries that were treated in other settings or went untreated.

Causes of TBI

Cause of injury varies across the three levels of severity. Firearms were the leading cause of injury among those who died where TBI was reported as a cause of death on the death certificate alone or in combination with other injuries or conditions. Unintentional fall was the leading cause of injury among those who were hospitalized with a TBI alone or in combination with other injuries or conditions. And, unintentional fall was the leading cause of injury among those who were treated and released from emergency departments with a TBI alone or in combination with other injuries or conditions.

Notes: Firearm-related injuries were reported but excluded from the etiology graphic due to overlap with multiple categories (e.g., homicide/assault, suicide). Firearms were related with 31% of deaths, 1.4% of hospitalizations, and <1% of emergency department visits. Completeness of external-cause coding for TBI-related cases can impact the accuracy of the cause classifications for hospitalizations and emergency department visits.

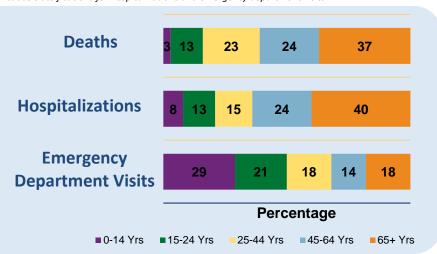


Figure 2: Percentage of Annual TBI-Related Deaths,* Hospitalizations,** and Emergency Department Visits,**by Age, in Nebraska, 2011

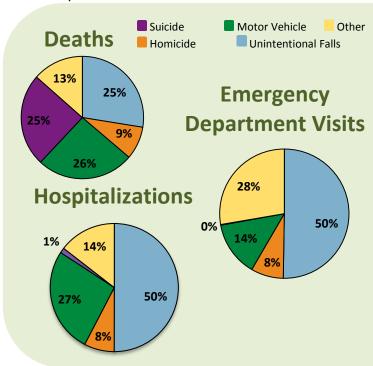


Figure 1: Percentage of Annual TBI-Related Deaths, Hospitalizations, and Emergency Department Visits, by External Cause, in Nebraska, 2011

TBI by Age

The highest number of TBI-related deaths* were among persons ages 75-84 years. Among those with TBI-related hospitalizations,** persons ages 75-84 years again were most affected. Persons ages 15-24 years made the most TBI-related emergency department visits.**

^{**} TBI alone or in combination with other injuries or conditions



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^{*}TBI was reported as a cause of death on the death certificate alone or in combination with other injuries or conditions

TBI by Gender

Men were more likely to sustain a traumatic brain injury than women. The magnitude of this difference was greatest among those who died. Men accounted for 72% (63.5 per 100,000) of deaths where TBI was reported as a cause of death on the death certificate alone or in combination with other injuries or conditions, 61% (104.1 per 100,000), of hospitalizations for TBI alone or in combination with other injuries or conditions and 53% (558.6 per 100,000) of emergency department visits for TBI alone or in combination with other injuries or conditions.



TBI Prevention Strategies

The Center for Disease Control's (CDC) National Center for Injury Prevention and Control (Injury Center) is committed to protecting people against preventable TBI by putting science into action.

- **State Injury Prevention Programs** The Injury Center's Core Violence and Injury Prevention Program (Core VIPP) funds state health departments to estimate the impact of TBIs and define the groups most affected. www.cdc.gov/injury
- Heads Up The Injury Center's campaign which offers free tools for health care providers, school administrators, nurses, teachers, coaches, and parents to help them recognize and respond to a TBI. www.cdc.gov/traumaticbraininjury
- Motor Vehicle Safety Motor vehicle crashes are a leading cause of death, injury and TBI in the US. CDC's primary prevention focuses on child passenger safety, seat belt use and reducing impaired driving.
 www.thecommunityguide.org/mvoi
 www.cdc.gov/motorvehiclesafety

NEBRASKA TBI Activities

Prevention

- Make concussion training available to coaches, athletic trainers, nurses, athletes, parents and other relevant parties. Trainings, fact sheets and resources are posted on the Nebraska Injury Prevention and Control website.
- Develop and implement public service announcements to raise awareness about the symptoms and consequences of concussions. Print ads and radio, television, and social media sites are being used.

Surveillance

- Monitor the rates of TBI in Nebraska and the rates of sports-related concussions among youth.
- Conduct surveys of coaches, athletic directors, and youth who sustained sports-related concussions to evaluate the implementation of the concussion law.

Partnerships

• The Injury Prevention and Control Program partners with the Brain Injury Association, the Nebraska State Athletic Trainers Association, Nebraska School Activities Association, Department of Education, Safe Kids and other community organizations to raise awareness about the Concussion Awareness Act and the symptoms, management and consequences of concussions.

Accomplishments/Successes

- On July 1, 2012, the Concussion Awareness Act became law in Nebraska. This law requires that education be made available to coaches, youth athletes and their parents, that youth athletes with suspected concussion be removed from play, and that youth athletes with a concussion can return to play only after they are cleared by a licensed health professional.
- As a result of the law, the Nebraska School Activities Association has made coaches' training mandatory for all schools in Nebraska.